

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

- 1                   1.       (Currently amended) A method of manufacturing an encapsulated  
2 calorimetric flow meter comprising the following steps:  
3                   providing an integrated circuit assembly incorporating a fluid flow channel, at  
4 least two temperature sensing elements operative to measure the temperature in different regions  
5 of the channel and a heating element located in between the temperature sensing elements to heat  
6 a region of the channel;  
7                   applying a quantity of gel to the integrated circuit ~~such as to~~ cover at least each  
8 end of the channel, thereby forming a gel-covered assembly;  
9                   inserting the gel-covered assembly into a cavity of a moulding tool ensuring that  
10 at least a portion of the gel is in contact with a surface of the cavity;  
11                  introducing a plastic mould compound into the cavity so as to encapsulate the gel-  
12 covered assembly except for the portion where the gel is in contact with the cavity surface; and  
13                  removing the gel-covered assembly from the cavity, whereby ~~there is an opening~~  
14 ~~defined in the plastic mould encapsulating the gel-covered assembly at each end of the channel,~~  
15 ~~thus allowing fluid to flow through the channel~~ the plastic mould compound forms a case which  
16 encompasses the gel-covered assembly, wherein there are openings defined in the case at each  
17 end of the channel thus allowing fluid to flow through the channel.
- 1                   2.       (Currently amended) A method as claimed in claim 1 wherein the  
2 channel is also filled with the gel before the integrated circuit assembly is encapsulated.
- 1                   3.       (Currently amended) A method as claimed in claim 1 wherein the  
2 integrated circuit assembly is mounted on a lead frame.

1                   4.       (Currently amended) A method as claimed in claim 3[[2]] wherein the  
2 lead frame has holes which coincide with the end of the channel when the integrated circuit  
3 assembly is mounted on the lead frame and the gel is applied so as to cover the holes in the lead  
4 frame.

1                   5.       (Currently amended) A method as claimed in claim 4 wherein a wall of  
2 the channel is formed by a portion of the lead frame and wherein there are slots provided in the  
3 lead frame alongside that portion of the lead frame forming a wall of the passagewaychannel.

1                   6.       (Currently amended) A method as claimed in claim 5 wherein the slots do  
2 not extend past the holes in the lead frame at either end of the passagewaychannel.

1                   7.       (Previously presented)       A method as claimed in claim 1 wherein the  
2 channel is formed by etching.

1                   8.       (Currently amended) A method as claimed in claim 1 wherein the  
2 channel is provided upon a reverse face of the integrated circuit assembly and the temperature  
3 sensing elements and ~~heat sensing~~the heating element are provided upon a front face of the  
4 integrated circuit assembly.

1                   9.       (Currently amended) A method as claimed in claim 1 wherein the  
2 integrated circuit assembly is a CMOS integrated circuit.

1                   10.     (Currently amended) A method as claimed in claim 1 wherein means are  
2 provided to allow direct or wireless communication between the integrated circuit assembly and  
3 external circuitry.

1                   11.     (Currently amended) A method as claimed in claim 1 wherein the  
2 integrated circuit assembly additionally incorporates processing means to calculate a mass flow  
3 from the temperature difference detected by the temperature sensing elements.

1                   12.     (Currently amended) A method as claimed in claim 1 wherein additional  
2 circuit elements are incorporated into the integrated circuit assembly, said additional circuit  
3 elements including one or more elements selected from a group consisting of: means operative to  
4 interface between the heating and sensing elements~~means~~ and external electronic control means;  
5 means operative to receive and store calibration data for the temperature sensing elements~~means~~;  
6 means operative to convert analogue signals to digital signals; ~~include~~ means operative to carry  
7 out calculations on the digital signals to facilitate improved or additional performance or to  
8 improve accuracy or to compensate the measurements for external or internal change; and means  
9 provided at a[[the]] fluid inlet and a[[the]] fluid outlet such that the errors due to the inlet and  
10 outlet temperatures not being equal can be corrected by calculation.